

REMARKS

In this response, Applicant has amended the Specification beginning at page 13 to incorporate in the written description the language of originally filed Claims 1, 9 and 10. Applicant also has amended many claims in response to the Examiner's comments, and added new Claims 46-71 to claim the invention more clearly and completely. Applicant notes that the amendments made to the previously pending claims and the newly added claims differ in certain respects from the Amendments and new claims submitted in Applicant's July 25, 2006 response to the final action that was not entered.

In the May 18, 2006 Final Action, the Examiner withdrew from consideration claims 23, 34, 42, 44 and 45 as directed to non-elected species with no generic claim allowed. We respectfully request the Examiner to reconsider and withdraw the species restriction requirement and reinstate these claims for consideration in view of the demonstrated allowability of generic claims, as discussed below.

The Examiner objected to claim 29 for its improper dependency. Claim 29 has been amended to correct the obvious typographic error noted by the Examiner and the objection should therefore be withdrawn.

The Examiner rejected claims 16-22, 24-33, 35-39, 41 and 43 under 35 USC § 112, ¶ 1 as failing to comply with the written description requirement allegedly because the claimed range for a fuel tank of from 12-16% oxygen "is beyond the scope of the invention" (5/18/06 Action at 3) for claims 16-22, 24-33, and 35-37, and because the claimed range for oxygen content in the hypoxic air propelling the water mist includes the range of from 15% to 16% is "considered new matter" (5/18/06 Action at 4) for claims 38, 39 and 41. The Examiner also rejected claims 16-22, 24-33, 35-41 and 43 under 35 USC § 112, ¶ 2 for various informal reasons.

In response, Applicant has had reviewed and amended the claims and as amended the Examiner's rejections under § 112 are now believed to be moot and should therefore be withdrawn. For example, references to the hypoxic air being supplied to a "fuel tank" and "passenger cabin" have been omitted from the independent claims and instead introduced as dependent limitations, and to align Applicant's claimed subject matter with the written description that refers to maintaining a hypoxic fire prevention environment in different compartments inside an aircraft. Accordingly, Applicant has used the term "compartment" in the claims to characterize where such an environment exists, defining a protected area, exemplified by the different compartments referenced in the Specification at pages 6-7 (discussing Fig. 1). See, e.g., claim 16 (replacing the "fuel tank" limitation with "compartment") and claim 26 (replacing "passenger cabin limitation" with "compartment").

Applicant also respectfully believes that the Examiner made a mistake, which probably resulted from a simple oversight, by rejecting claims 16-22, 24-33, 35-39, 41 and 43 in his Final Action for lack of written description or as introducing new matter (Action at 3-5). Applicant respectfully transverses these rejections because "the upper range of 12-16% or 15-16% was indeed disclosed in the Specification as originally filed. In fact, claim 9 of the original specification says: "the oxygen content in said hypoxic air propelling water mist being below 16%". This disclosure provides a written description for an upper range of 16% oxygen or below in the hypoxic air used in fire prevention and suppression in an aircraft compartment and, as a result, provides a written description that would be understood by a person of ordinary skill in the art to establish a fire-preventing and/or fire-extinguishing atmosphere in an aircraft compartment containing up to 16% of oxygen. Applicant, accordingly, has now amended the Specification to incorporate this original disclosure into the written description.

In the May 18, 2006 action the Examiner rejected claims 16-19, 21, 24, 25, 28, 31, 32, 35, 36 and 40 under § 102(e) as anticipated by Crome U.S. Patent 6,997,970 (“Crome”), and rejected claims 38, 39, 41 and 43 under 102(e) as anticipated by Lessi U.S. Patent 6,739,400 (“Lessi”). We respectfully traverse.

The Examiner contends Crome discloses inerting a fuel tank by supplying [an] oxygen depleted second gas mixture to the fuel tanks with a range [of oxygen] up to 12% (5/18/06 Action at 8). However, Crome does not teach or suggest provided a “hypoxic fire prevention environment” in a “compartment” inside an aircraft where the oxygen content is in a range from “greater than 12% to approximately 16%,” as is called for in Applicant’s independent claim 16, and as similarly called for in Applicant’s independent claims 28, 38, 39, and 40 and all the claims respectively depending therefrom (as amended). Accordingly, because Crome does not disclose the range of 12-16% that Applicant is the first to have discovered, disclosed and claimed, notwithstanding that inerting fuel tank compartments with lower levels of oxygen (e.g. 9% and below) has been known to those skilled in the art for over fifty years, the Examiner’s anticipation rejections based on Crome must be withdrawn.

Regarding Lessi, the Examiner contends it discloses extinguishing fires using a water mist propelled by hypoxic air in which the oxygen content is between 9 and 12% (5/18/06 Action at 8). However, similar to Crome, Lessi does not teach or suggest to provide “oxygen content in said hypoxic air propelling water mist being above 12% and below 16%,” as called for in Applicant’s claim 38 and 39, and similarly called in claim 41 and claim 43 (range of 12-15%) (as amended). Accordingly, the Examiner’s anticipation rejections based on Lessi cannot be sustained claims 38, 39, 41 and 43 should be allowed.

Regarding new claims 46-71, which claim among other things a hypoxic fire prevention environment having an oxygen range of 10-16% in a compartment of an aircraft, Applicant respectfully submits that they are entitled to the benefit of prior application Serial No. 09/854,108 filed May 11, 2001, now U.S. Patent 6,401,487 (the '487 patent") from which priority is claimed. See, e.g. '487 patent at Col. 22 line 54-56 (a fire extinguishing composition with an oxygen content below the hypoxic threshold of 16.8% and preferably in a range of 14-16% in the pressure cabin compartment) and see '487 patent at Col. 8 line 50-57 and Col. 21 line 31-32. Therefore, Applicant respectfully submits that Crome, which has an earliest effective filing date of June 27, 2002 (based on provisional application 60/391,0861) is not prior art under § 102(e) (or any other paragraph of § 102) as to these new claims.

Following the Final Action, Applicant was able to get professional help by consulting with patent attorney Robert M. Isackson (Registration No. 31,110), which resulted in the amended and new claims provided above, and in responding to the points raised in the Examiner's May 16 and August 16, 2006 communications. It is respectfully believed that the pending claims as amended overcome the Examiner's rejections, therefore Applicant respectfully requests that Examiner allow these claims (and the withdrawn claims) and grant a patent.

CONCLUSION

Applicant believes he has made a patentable contribution to the art. Should any questions arise, the Patent Office is invited to telephone the applicant at (212) 826-0252.

Respectfully submitted,



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